California Postsecondary Education Commission

Update on Space and Utilization Policies in Higher Education

September 2004

The State's current Space and Utilization Standards are no longer appropriate or realistic for determining the need for academic space in its public colleges and universities.

The Commission finds that flexible space and utilization guidelines for California's public postsecondary institutions provides the most efficient and effective approach for meeting the evolving needs of academic programs.

Contents

Purpose *1*

Background and History *1*

CPEC 2002-03 Survey and Research *3*

State and National Space Utilization Rates *4*

Conclusions and Recommendation *6*

The Commission advises the Governor and Legislature on higher education policy and fiscal issues. Its primary focus is to ensure that the state's educational resources are used effectively to provide Californians with postsecondary education opportunities. More information about the Commission is available at www.cpec.ca.gov.

Commission Report 04-13

Purpose

This report is provided as an update to the Commission's 1990 study, *A Capacity for Learning*, which examines higher education space and utilization guidelines both in California and around the nation. It reviews and evaluates the Commission's space guidelines from a national perspective of policy research and provides information from other states. It includes background and historical information on space planning polices in California, presents contemporary information, and draws conclusions about emerging trends in higher education space usage policies and practices. The update also addresses several issues raised by the Legislative Analyst's Office with regard to the Commission's 1990 study.

Background and History

Space and utilization guidelines and standards are budgetary planning tools that can measure the need for academic spaces such as classrooms, laboratories, research space, and faculty offices. These measurements help determine the amount of physical space to be allocated on a per-student full-time equivalent (FTE student) or per faculty member full-time equivalent (FTF faculty) basis in buildings, specific to program need.

The State's current utilization guidelines and standards, originally adopted in 1966 and tightened in 1971 and 1973, do not take into account the new instructional and programmatic space needs and instructional delivery systems of today. This report suggests new and more realistic approaches for determining space allocation formulas for California's public colleges and universities for the 21st century.

California's higher education space standards were first developed between 1948 and 1966 by consultants and researchers working to accommodate the post World War II enrollment surge so as to ensure student access and opportunity as outlined in the State's 1960 Master Plan for Higher Education. The Commission's predecessor, the Coordinating Council for Higher Education (CCHE), adopted formal higher education space and utilization standards in 1966 in a report entitled, *Space and Utilization Standards, California Public Higher Education*. In the early 1970's, in response to the State's economic challenges, the Legislature tightened these utilization standards, requiring higher utilization before new space could be justified. Unfortunately, no research had been done in advance of these changes to validate their intended effect. The State's public universities strongly objected to the changes at the time, noting that there was no justification for reducing square footage allowance formulae. However, the policies were implemented and have remained in place ever since.

Table 1 below summarizes the evolution of California higher education facilities space and utilization research and policies since the late 1940's. The Space and Utilization Standards adopted formally by the Legislature in 1971 and 1973 are still in use today, even though subsequent studies and recommendations for revising the standards have been conducted.

TABLE 1 Higher Education Space and Use Standards in California

1948 – *A Report on a Survey of the Needs of California Higher Education* (George Strayer and Associates).
1955 – *A Restudy of the Needs of California Higher Education* (T. R. McConnell). First California higher education space/use standards; developed in anticipation of the building program envisioned in the "Masterplan for Higher Education."
1965 – Senate Bill 318 of 1965. Required development of elements of space/use standards for instructional space in junior colleges; developed in response to Master Plan recommendations for State construction of a public junior college system.
1966 – *Space and Utilization Standards, California Public Higher Education* (CCHE, CPEC's predecessor). The first review of space/use standards since the 1955 *Restudy*; it was focused primarily on classrooms and class labs.
1970 – *The California Higher Education Facilities Planning Guide of 1970* (CCHE and U.S. Dept of Ed.). Attempted to explain major elements of space/use standards in general planning; was primarily oriented towards the UC system.
1971 – ACR 151 (1970). Increased classroom utilization standards, directed CCHE to study space use in CSU; was done in response to defeat of $200 million bond issue, "Proposition 3 of 1968," which had led to concerns of insufficient resources.
1973 – Supplemental Report Language to the 1973-74 Budget Act. Increased utilization standards for class laboratories to same high levels required in ACR 151 for classrooms; was adopted to deal with State fiscal pressures during the recession.
1985 – Supplemental Report Language to the 1985-86 Budget Act. Directed CPEC to study space/use standards for classrooms, laboratories, and faculty offices – *Time and Territory* (CPEC, February 1986). This led to 1987 appropriation of $300,000 to CPEC to perform a more comprehensive analysis – *A Capacity for Learning* (CPEC, January 1990).
1990 – *A Capacity for Learning,* (CPEC). The most recent analytical report, which reviews existing standards and presents recommendations for revisions.
Source: CPEC reports and staff analysis.

As Table 1 shows, most of the analytic and evaluative activity in this area in California happened nearly a half-century ago, as the State prepared to develop its Master Plan for Higher Education. The 1990 Commission report, *A Capacity for Learning,* was the first comprehensive study of California space and use standards since 1966 and the first study of research space since 1955. *A Capacity for Learning* examined how changes in teaching and research practices over time had affected space requirements and contains recommendations to modernize space/use policies and establish a permanent review process to maintain relevance in the guidelines. The Legislature did not formally adopt the 1990 recommendations in *A Capacity for Learning,* however, the University of California has implemented many of them. Major recommendations from the report are shown in Table 2.

TABLE 2 Summary of Major Conclusions and Recommendations from the CPEC report, *A Capacity for Learning*

I. General recommendations: simplify the standards wherever possible and apply them campus-wide, not to individual projects; require biennial segmental reports on space use; establish a permanent CPEC space/use standards advisory committee.

II. Classrooms: slightly relax classroom utilization standards, but continue them as being among the most stringent in the nation; maintain an Assignable Square Footage (ASF-per-station) standard; provide for storage space in CCCs.

III. Teaching Labs: institute a single use standard for lower and upper-division; set standards for five laboratory types, a dramatic reduction from the individual standards for several dozen disciplines; allow minor increase in storage space (2-4%) in all three systems.

IV. Research space: establish guidelines for six laboratory types and allocate space for only "primary" researchers – State-funded faculty, graduate students and postdoctoral fellows; set space/use guidelines near national norms and in conformity with recent practice, including office space for graduate students.

V. Faculty offices: improve office space for CCCs by 58%, for CSU by 14.3%, and for UC by 9.4%; the CCCs had minimal formula space for offices and other functions in the 1966 CCHE space standards.

In its January 2002 report on higher education space and utilization standards entitled, *Building Standards in Higher Education,* the Legislative Analyst raised several questions about the recommendations in the Commission's 1990 report. The Analyst's four major concerns with the Commission's report and recommended guidelines included: (a) providing research space for post-doctoral fellows and part-time community college faculty; (b) the University's research space being in excess of the Commission's guidelines; (c) the costliness of funding the Commission's guidelines; and d) Commission standards not requiring systems to assume summer term use that would be equal to that in the highest non-summer term.

CPEC 2002-03 Survey

In response to the Legislative Analyst's report and due to the need to review the State's space and utilization policies, the Commission re-examined the issues surrounding space determinations and conducted a survey of space and utilization practices in other states. Additionally, two national consulting firms working in this area -- MGT of America, Inc., based in the State of Washington and Paulien and Associates, based in Colorado -- provided information on space and utilization policies and practices. The information presented in this update is derived from a combination of information provided by these two consulting firms, as well as responses to specific survey questions posed by Commission staff.

The Commission's survey was designed to address some of the main areas of contention in California higher education space and usage policies: the currency of the policies, the specific areas of providing space for postdoctoral fellows and part-time faculty, and the impact of year-round operations on assumptions used in space planning. A summary of the results of the survey is presented below. Further information about which states responded, which states have standards and/or guidelines, the year in which each state adopted its space and utilization policy, and a breakdown of how each state responded to the five survey questions can be found in a Technical Background Paper, published separately from this Update.

Survey Question One: *In what year were your most current space and utilization standards/guidelines for use in public higher education institutions adopted?* Sixteen of the 34 states responding indicated that they do not have space standards or guidelines for higher education. The other 18 states provided the year of their most recent adoption of higher education space policies. No state reported a date any earlier than California's (1973) as the last legislatively adopted revision to space standards. The average date of most current space policies is 1994; most have adopted or revised their guidelines in the last 15 years.

Survey Question Two: *Do any of these standards/guidelines provide for space for postdoctoral fellows involved in research at your flagship research institutions or other public colleges and universities?* Twenty-one of the 34 states specifically addressed this question, while the other 13 reported that they have "permissive" policies that allow for the use of this space. None of the 34 states responding to the survey have standards that prohibit the provision of research space for postdoctoral fellows at their institutions.

Survey Question Three: *Do these standards/guidelines allocate space for use by part-time faculty in any of your public institutions?* All of the states surveyed have policies that either allow for the allocation of space for use by part-time faculty or have space usage guidelines that do not specifically prohibit this provision of space, wherein it is permitted on a project-by-project basis.

Survey Question Four**:** *Do your higher education space and utilization standards/guidelines presume "full utilization" year-round? (Full utilization is defined here as assuming for planning purposes that campuses will be as fully enrolled in the summer months as at any other time in the year.)* None of the states surveyed used full summer utilization in space planning. Minnesota "assumes" full summer utilization in its planning, however, this assumption carries with it no planning mandate or budgetary consequences for non-achievement. In fact, Minnesota reports that its busiest summer FTE enrollment ever measured was at approximately 18 percent of fall term FTE, and that this occurred at its most non-traditional institution that has a high percentage of adult students.

Survey Question Five**:** *What is the highest "percentage of highest term enrollment" you have measured for summer term enrollment at your public campuses, if such a statistic is available? (For example, is the busiest summer you've had equal to: 30% of fall term, 50% of winter term, 20% of spring term, etc.?)* Only three of the states collect this information. California had the highest "percentage of highest term enrollment", at 40 percent, while Florida enrolled only 37 percent, Minnesota enrolled 18 percent and Ohio enrolled 18 percent of other term enrollments.

State And National Space Utilization Rates

Table 3 below displays the current legislatively revised utilization standards for California higher education that were adopted in the early 1970's and are in use today by the California Community Colleges and the California State University. The University of California no longer follows these standards, instead using the Commission's guidelines and standards as proposed by the Commission in 1990.

TABLE 3 1970's Legislative Utilization Standards — CCC, CSU, and UC

Category	Weekly Room Hours	Station Occupancy Percentage	Weekly Hours Station Use
CCCs Classrooms	53.0	66.0%	35.0
Teaching laboratories	27.5	85.0	23.4
CSU Classrooms	53.0	66.0	35.0
Teaching laboratories			
• Lower division	27.5	85.0	23.4
• Upper division and graduate	22.0	80.0	17.6
UC Classrooms	52.5	66.7	35.0
Teaching laboratories			
• Lower division	27.5	85.0	23.4
• Upper division	22.0	80.0	17.6

Reprinted from the LAO report "Building Standards in Higher Education," January 2002.

Table 4 below displays the Commission's proposed space guidelines as compared with guidelines used in 26 other states. The Commission's guidelines, while less stringent than the legislatively imposed standards of 1971 and 1973, are still among the most rigorous in the nation. Highlighted in bold are the space usage guidelines for California and for other states, institutions, or classifications where guidelines or standards exceed those in the Commission's guidelines.

TABLE 4 Utilization Rates for Classrooms and Teaching Labs Nationally

STATE (Type of Inst.)	*Classrooms* Weekly Room Hours	*Classrooms* Station Occupancy Rate (%)	*Teaching Laboratories* Weekly Room Hours	*Teaching Laboratories* Station Occupancy Rate (%)
Alaska: CCs and University	30	60	20	80
Arizona: University	35	65	25	**85**
California: Community Colleges	**42**	**71.4**	**27**	**80.0**
California State University	**42**	**71.4**	**25**	**80.0**
University of California	**42**	**71.4**	**25**	**80.0**
Colorado (Academic labs)	30	67	20	80
Florida: Univ. (Upper & Grad)	40	60	20	80
CC < 2,500 enrollment	**58.5**	55	21.0	80
CC > = 2,500 enrollment	**58.5**	60	24.0	80
Kansas	30	60	20	80
Kentucky	38	67	23	80
Louisiana	30	60	20	80
Maryland: CC < 1,000 FTE enrollment	30	60	20	75
CC 1,000-2,499 FTE enrollment	31	62.5	21	80.0
CC 2,500 - 4,999 FTE enrollment	32	62.5	22	80.0
CC >= 5,000 FTE enrollment	33	65	23	80
Univ <= 3,000 FTE enrollment	30	60	21	79
Univ 3,000-6,000 FTE enrollment	30	65	21	79
Univ > 6,000 enrollment	30	70	21	79
Nebraska	30	65	20	65
New Hampshire (Upper & Grad.)	30	60	18	70
New York CUNY (classroom)	30	**80**	22	75
CUNY (small room)	30	**80**	22	75
CUNY (lecture hall)	30	**80**	22	75
New York Univ. (classroom)	30	60	22	75
University (small room)	30	60	22	75
University (lecture hall)	30	60	22	75
North Carolina	35	65	20	75
Ohio: (2-year Colleges): Technical	31.5	67	N/A	N/A
Comm Colleges	31.5	67	N/A	N/A
University	31.5	67	22.5	80
Oklahoma: < 1,000 enrollment	27	40	24	*80
1,000 - 2,999 enrollment	28.5	40	24	*80
> = 3,000 enrollment	30	40	24	*80
Oregon: (Upper & Grad.)	33	60	16	75

Penn.: (CCs) # of classrooms:				
10-25	32	**75**	26.0/24.0	80
26-45	36	67	26.0/24.0	80
46-70	36	67	26.0/24.0	80
71-125	30	**75**	26.0/24.0	80
126 & Over	23	**80**	26.0/24.0	80
South Carolina (University)	35	60	16-18	75
South Dakota: Univ. Assoc. Arts	32	65	18	80
University BA & Masters	30	60	20	85
Doctoral	28	55	16	75
Tennessee	30	67	18	80
Texas	38	67	25	80
Utah	34	67	22.5	80
Virginia	N/A	N/A	N/A	N/A
Washington: University	Net seat hrs. = 20	60	20	80
Wisconsin	30	67	24	80
Wyoming	33	60	20	75

* Oklahoma's space standards are presented as **additive** for two academic terms and, thus, appear to be twice as high as they are in practice.

Sources: MGT of America report *Space Standards for Selected States' Higher Education Systems;* CPEC Report 90-3, *A Capacity for Learning.*

With regard to utilization rates for classrooms, community colleges in Florida have higher utilization rates than the Commission's guidelines. Only selected institutions in New York and Pennsylvania have higher station occupancy rates for classrooms than California. (Station occupancy refers to the percentage of time during the academic week that the room is expected to be in use.) For weekly room hours anticipated for teaching labs, no state has higher rates than the Commission's California guidelines and only one state (Arizona) has any higher station occupancy rates for teaching labs than the Commission's guidelines for California.

The information in this table is best viewed in the context of the information provided by other states on the level of flexibility in space standards that are allowed. The picture that emerges nationally is one of lower anticipated levels of space usage in nearly every other state, higher education system, and level of instruction than in California.

The standards set forth in the Commission's 1990 report have played a major role in the upgrading of space usage policies in other states. Representatives from Florida, Texas and Oregon have commented on their use of the Commission's report and research as they re-evaluated their standards in the early 1990s. MGT cites the California report as the first of its "updated national surveys of space standards in higher education". The 1990 Commission report is credited with opening the door nationally to new and more responsive planning concepts and away from prescriptive, out-moded, "lock-step" planning mandates.

Conclusions and Recommendation

The State's current Space and Utilization Standards are no longer appropriate or realistic for determining the need for academic space in its public colleges and universities. Since the State last developed and adopted classroom space and utilization standards in 1971 and 1973, much has changed in the under-

standing of the use of space in colleges and universities both in California and throughout the nation. Most states have moved away from statewide or system-wide standards and now embrace more flexible guidelines in planning for space needs. Many states, even those with formalized standards or guidelines, report using a more "situational" process whereby institutions may propose space usages or configurations that they feel best meet programmatic needs. These institutional proposals are examined in the state's budget process and policymakers evaluate them on a case-by-case basis.

California's public postsecondary education infrastructure is worth tens of billions of dollars and the maintenance of the physical plant is costly. Updated space allocation and utilization policies will better facilitate contemporary construction and building renovation techniques. Advances in these areas have lengthened building life and utility far beyond that envisioned in traditional space and utilization standards. The combination of modern space planning policies and modern building design will increase the efficiency and sustainability of California's institutions, thus lessening capital outlay costs over time.

The Commission concludes that flexible guidelines in the area of space and utilization in California's public postsecondary institutions provide the most efficient and effective approach for meeting the evolving needs of academic programs, and for best facilitating the progress of students through the State's colleges and universities. With the advent of distance education, new and different instructional strategies, and new student and program space needs, California's higher education institutions should not be locked into rigid and impractical space and utilization standards that were developed several decades ago.

The Commission makes the following recommendation:

> The State Legislature should adopt the Commission's recommendations from its 1990 report, *A Capacity for Learning*, in order to address student and program space needs of the 21st century and to accommodate the realities of higher education's varying and dynamic programmatic needs for its three public segments of higher education.

Additional data and specific details leading to the information and recommendations in this report may be found in the Appendix to the report.